



Expectation vs Reality

The background features three overlapping circles in two shades of blue (a medium blue and a darker blue) on a dark gray background. A horizontal white band cuts across the middle of the circles.

NestorBot : A Mail Handling Companion

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Gentle Reminder

- Designs are Hi – Level
- Guidelines not Rules
- Tentative
- Similar
- Under implemented

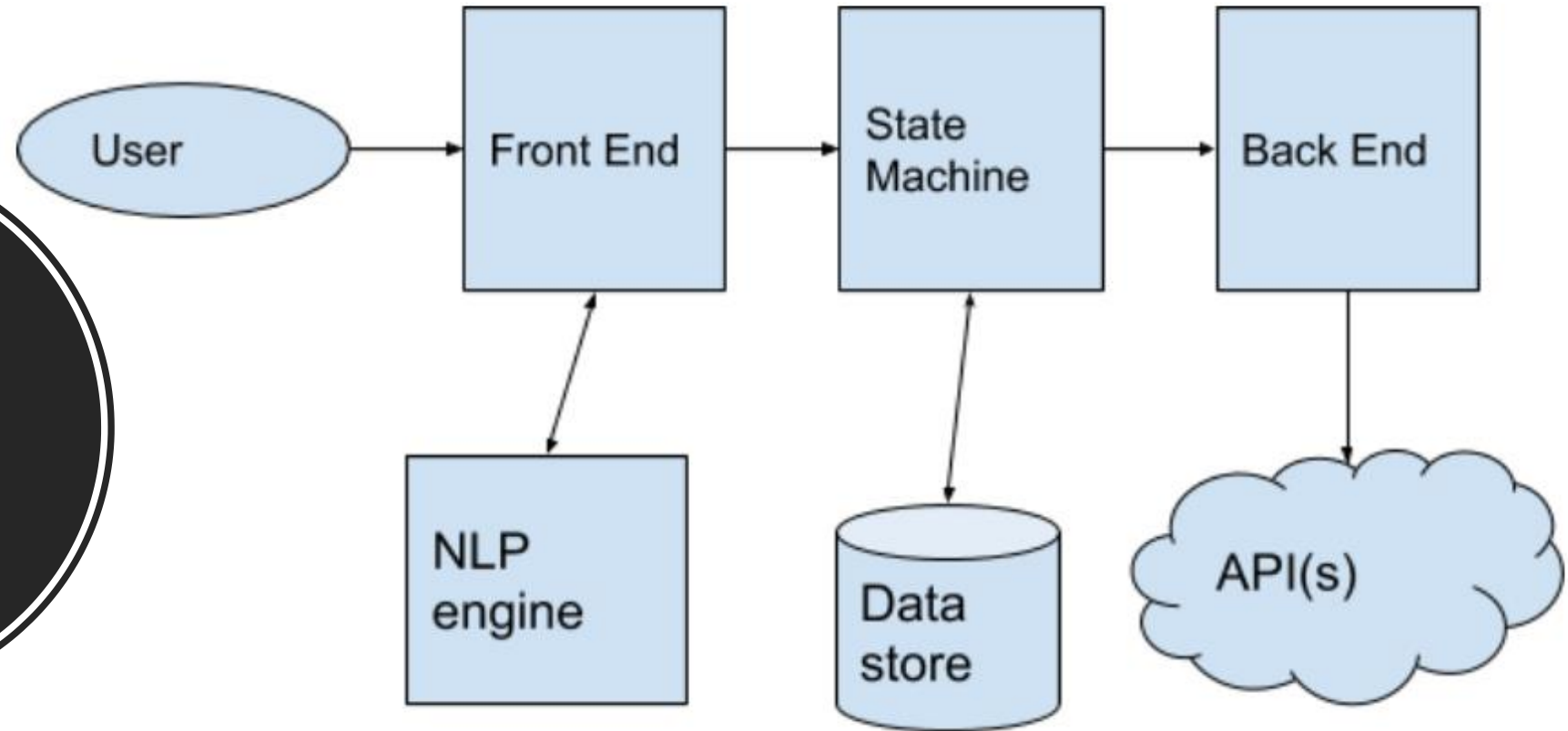
Agenda

- Functions
- Architecture
- FrontEnd
- State Machine
- BackEnd
- Demo
- FutureWork

Functions

- Create and send mail (*Can you send a mail to ...*)
- Read important mails (*Any mail from ...*)
- Send calendar meeting invites and fix non-conflicting times (*Can you keep a meeting with ... on*)
- Add contacts (*Can you save this id ..*)
- Check schedule (*What's on today's list*)
- Adding/Loading mail template (*can you load me a template to*)

NestorBot Architecture



Front-End

- **Type of interface** – platform app vs web
- **Type of NLP engine** – Home grown (NLTK/ re) vs third-party (DialogFlow/ LUIS)
- **Token recognition** – Bot (NLP Engine) should extract tokens meaningfully
- **Context resolution** – What do you mean by ‘tomorrow’ ?
- **User involvement** – User can’t wait long!
- **Front-End abstractions** – decoupled from other parts – e.g. - `get_tokens()`

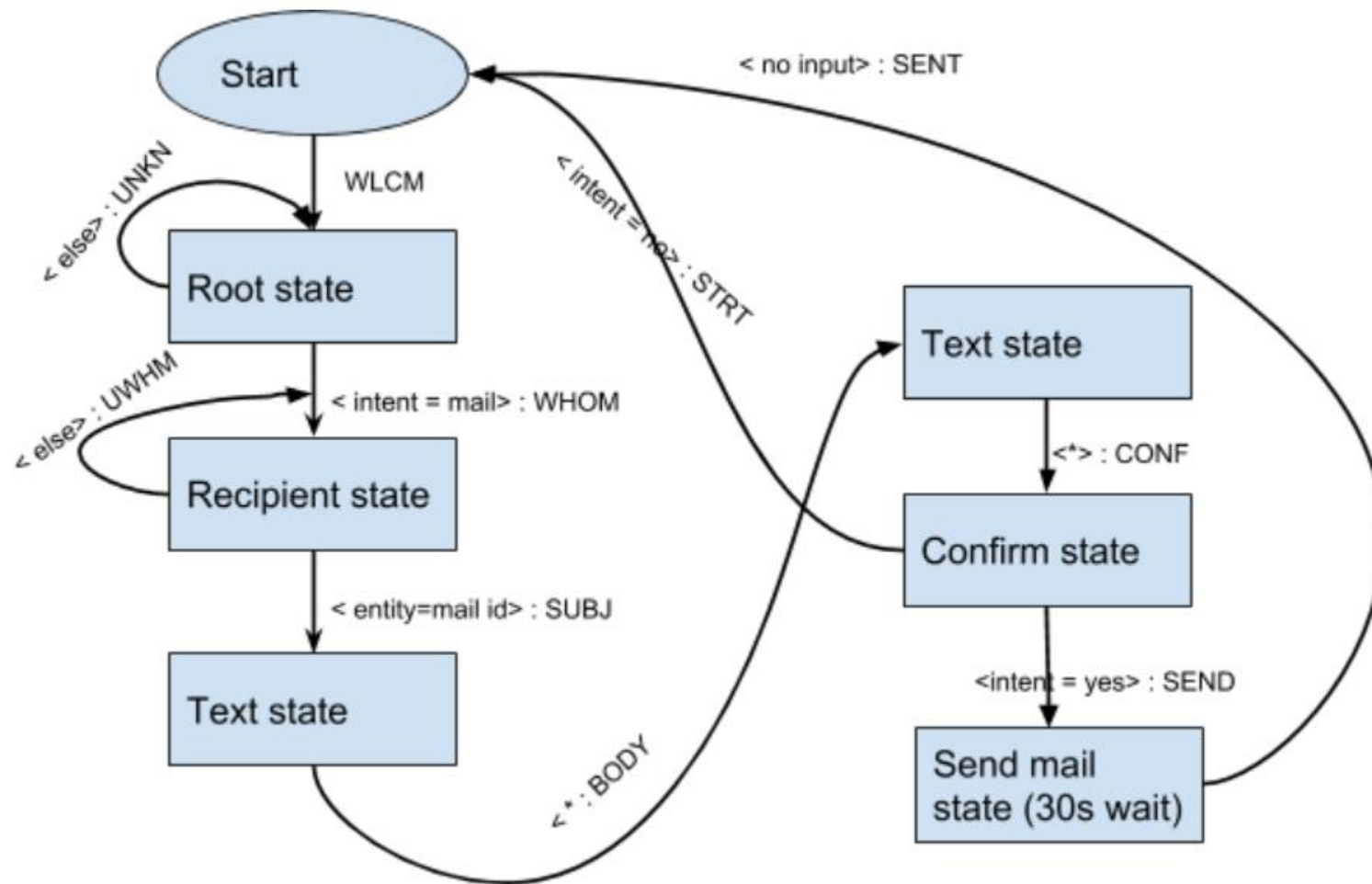
NestorBot Tokens

- **Entities** – Nouns relevant to my conversation – **abc@xyz.com**,
- **Intents** – Verbs/ Actions to be performed – **schedule a meeting** tomorrow
- **Contexts** – Refers to some intuitive conversation values – e.g. – read **recent** mails

State Machine

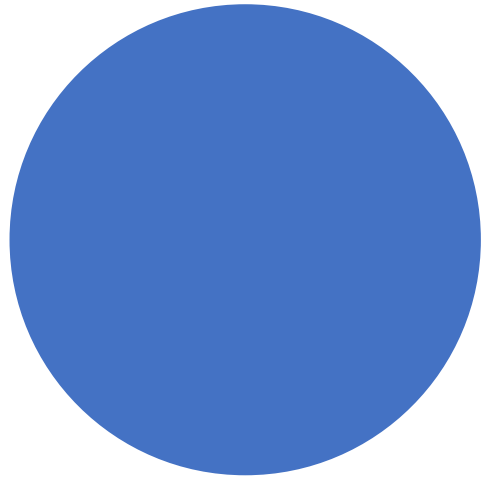
- **Context switch** – I'll be right back, Can you save this ?
- **Interfacing** – Has proper interfaces to data-store, front-end, back-end
- **Persistent storage** – store states, contexts, proper CRUD operations
- **Logging and storage has to be designed separately**

NestorBot State Machine



Back-End

- **API type** – Gmail + Calendar vs Outlook + Calendar vs IMAP/SMTP + CalDAV
- **Session Management** – bad networks, failure to connect/authenticate
- **Security** – Authentications. Do you trust Nestor to keep your passwords safe ?
- **Abstraction** – Common interface to take action requests – (e.g. – send_mail)



Demo

- Regex
- Basic states
- SMTP / Gmail
- Single conversation

Future work – looooots !!!

NestorBot Tasks

Updated 4 minutes ago

Filter cards

+ Add cards

6 To Do

! Send meeting request using calDAV API

0 of 2

#16 opened by amartyaamp

enhancement

! Send a Calendar invite with Gmail API

0 of 2

#14 opened by amartyaamp

enhancement

Automated as To do

Manage

3 In progress

! Add Adaptive cards to bot framework front end

0 of 3

#9 opened by amartyaamp

enhancement

! Integrate state machine and LUIS bot

0 of 2

#12 opened by amartyaamp

enhancement

Automated as In progress

Manage

3 Done

! Use LUISbot to extract entities and intents

0 of 2

#1 opened by amartyaamp

enhancement

! Use Gmail API to send mail

0 of 2

#2 opened by amartyaamp

enhancement

Automated as Done

Manage

Thank you!

- **Suggestions ? Contribute ?**
 - team_nestorbot@hotmail.com
 - <https://github.com/amartyaamp/NestorBot/issues>
- **Image Courtesy**
 - Shutterstock, the daily beast